

| Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error Definiti on |
|------|-----|------|--|------------------------------------|------------------|----------|-------------------|
| 1 | BRS | L1 | 15096 staphylococcus adj aureus | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:23 | | 0 |
| 2 | BRS | L2 | 67 hop adj acid | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:23 | | 0 |
| 3 | BRS | L3 | 26 (hexahydro adj beta adj acid) or (hexahydro adj beta adj salt) or (tetrahydroiso adj alpha adj acid) or (tetrahydroiso adj alpha adj salt) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:23 | | 0 |
| 4 | BRS | L4 | 4 ((hop adj acid) or ((hexahydro adj beta adj acid) or (hexahydro adj beta adj salt)) or (tetrahydroiso adj alpha adj acid) or (tetrahydroiso adj alpha adj salt))) same (staphylococcus adj aureus) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:24 | | 0 |
| 5 | BRS | L5 | 65445 tampon or (wound adj dressing) or suppository or (disposable adj diaper) or (sanitary adj napkin) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:29 | | 0 |
| 6 | BRS | L6 | 32659 fiber or film or foam or wood or pulp or (peat adj moss) or (aborbent adj material) or (superabsorbent adj polymer) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:30 | | 0 |

| Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error |
|------|-----|------|--|---------------------------------------|------------------|----------|------------|
| | | | | | | | Definition |
| 7 | BRS | L7 0 | (tampon or (wound adj dressing) or suppository or (disposable adj diaper) or (sanitary adj napkin)) same (fiber or film or foam or wood or pulp or (peat adj moss) or (aborbent adj material) or (superabsorbent adj polymer) same ((hop adj acid) or adj acid) or adj salt) or alpha adj acid) or alpha adj salt))) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/01 14:31 | 0 | 0 |

| Type | L # | Hits | Search Text | DBs | Time Stamp | Comments | Error |
|------|-----|------|--|---------------------------------------|----------------------|----------|------------|
| | | | | | | | Definition |
| 8 | BRS | L8 | (fiber or film or foam or wood or pulp or (peat adj moss) or (aborbent adj material) or (superabsorbent adj polymer)) same ((hop adj acid)) or ((hexahydro adj beta adj acid) or (hexahydro adj beta adj salt) or (tetrahydroiso adj alpha adj acid) or (tetrahydroiso adj alpha adj salt))) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/0 1 14:31 | | 0 |
| 9 | BRS | L9 | ((fiber or film or foam or wood or pulp or (peat adj moss) or (aborbent adj material) or (superabsorbent adj polymer)) same ((hop adj acid)) or ((hexahydro adj beta adj acid) or (hexahydro adj beta adj salt) or (tetrahydroiso adj alpha adj acid) or (tetrahydroiso adj alpha adj salt)))) same (staphylococcus adj aureus) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/0 1 14:34 | | 0 |
| 10 | BRS | L10 | lactobacillus | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/0 1 14:34 | | 0 |

| Type | L # | Hits | Search Text | DBs | Time Stamp | Comm ents | Error r | Error Defi niti on |
|------|-----|-------|--|---------------------------------------|----------------------|-----------|---------|--------------------|
| 11 | BRS | L11 1 | (staphylococcus adj aureus) same lactobacillus same (hop adj acid) or (hexahydro adj beta adj acid) or (hexahydro adj beta adj salt) or (tetrahydroiso adj alpha adj acid) or (tetrahydroiso adj alpha adj salt))) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/12/0 1 14:34 | 0 | | |

=> d his

(FILE 'HOME' ENTERED AT 14:59:23 ON 01 DEC 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA'
ENTERED AT

14:59:57 ON 01 DEC 2002

L1 202 S HOP ACID

L2 37 S (HEXAHYDRO BETA ACID) OR (HEXAHYDRO BETA SALT) OR
(TETRAHYDRO

L3 231 S L1 OR L2

L4 206825 S STAPHYLOCOCCUS AUREUS

L5 3 S L3 (P) L4

L6 3 DUPLICATE REMOVE L5 (0 DUPLICATES REMOVED)

L7 68280 S LACTOBACILLUS

L8 1 S L6 (P) L7

L9 3048335 S FIBER OR FILM OR FOAM OR WOOD OR PULP OR (PEAT
MOSS) OR (ABSO

L10 1 S L5 (P) L9

L11 13119 S TAMPON OR (WOUND DRESSING) OR SUPPSITORY OR
(DISPOSABLE DIAPE

L12 1 S L5 (P) L11

=> log y

FILE 'HOME' ENTERED AT 14:59:23 ON 01 DEC 2002

=> file medline caplus biosis embase scisearch agricola
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 14:59:57 ON 01 DEC 2002

FILE 'CAPLUS' ENTERED AT 14:59:57 ON 01 DEC 2002
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FILE 'EMBASE' ENTERED AT 14:59:57 ON 01 DEC 2002
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FILE 'SCISEARCH' ENTERED AT 14:59:57 ON 01 DEC 2002
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FILE 'AGRICOLA' ENTERED AT 14:59:57 ON 01 DEC 2002

=> s hop acid
L1 202 HOP ACID

=> s (hexahydro beta acid) or (hexahydro beta salt) or (tetrahydroiso alpha acid) or (tetrahydroiso
4 FILES SEARCHED...
L2 37 (HEXAHYDRO BETA ACID) OR (HEXAHYDRO BETA SALT) OR (TETRAHYDROISO
ALPHA ACID) OR (TETRAHYDROISO ALPHA SALT)

=> s l1 or l2
L3 231 L1 OR L2

=> s staphylococcus aureus
L4 206825 STAPHYLOCOCCUS AUREUS

=> s l3 (p) 14
L5 3 L3 (P) L4

=> duplicate remove 15
PROCESSING COMPLETED FOR L5
L6 3 DUPLICATE REMOVE L5 (0 DUPLICATES REMOVED)

=> d 16 1-3 ibib abs

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:539564 CAPLUS
DOCUMENT NUMBER: 137:99058
TITLE: Antimicrobial diapers and wet wipes containing
tetrahydroiso-.alpha. or hexahydroiso-.beta. acids
INVENTOR(S): Barney, Michael C.; Navarro, Alfonso; Ryder, David S.
PATENT ASSIGNEE(S): Miller Brewing Company, USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| WO 2002055119 | A2 | 20020718 | WO 2001-US51351 | 20011019 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, | | | |

VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, M, MZ, SD, SL, SZ, TZ, UG, ZW, AT, E, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-693123 A 20001020

AB Diapers and wet wipes for cleansing of infants are made anti-bacterial by the inclusion therein of ***hop*** ***acid*** derivs., specifically ***tetrahydroiso*** - . ***alpha*** . ***acid*** and ***hexahydro*** - . ***beta*** . ***acid*** . These compds. are effective in inhibiting the growth of gram-pos. bacteria, and specifically chosen to combat ***Staphylococcus*** ***aureus***, a primary factor in toxic shock syndrome in infants. No growth or possibly weak growth of S. aureus was obsd. at ***tetrahydroiso*** - . ***alpha*** . ***acid*** or ***hexahydro*** - . ***beta*** . ***acid*** concns. as low as 1.56 ppm at a neutral pH.

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:504661 CAPLUS

DOCUMENT NUMBER: 137:68261

TITLE: Antimicrobial hop acids for diapers and wet wipes

INVENTOR(S): Barney, Michael C.; Navarro, Alfonso; Ryder, David S.

PATENT ASSIGNEE(S): Miller Brewing Company, USA

SOURCE: PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2002051458 | A2 | 20020704 | WO 2001-US50963 | 20011019 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |

PRIORITY APPLN. INFO.: US 2000-693123 A 20001020

AB Diapers and wet wipes for cleansing of infants are made antibacterial by the inclusion therein of ***hop*** ***acid*** derivs., specifically ***tetrahydroiso*** - . ***alpha*** . ***acid*** and ***hexahydro*** - . ***beta*** . ***acid*** . These compds. are effective to inhibit the growth of gram-pos. bacteria, and specifically chosen to combat ***Staphylococcus*** ***aureus***, a primary factor in toxic shock syndrome in infants.

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:283780 CAPLUS

DOCUMENT NUMBER: 134:300854

TITLE: ***Hop*** ***acids*** used for inhibition of ***Staphylococcus*** ***aureus***

INVENTOR(S): Barney, Michael C.; Navarro, Alfonso L.; Ryder, David S.

PATENT ASSIGNEE(S): Miller Brewing Company, USA

SOURCE: PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| WO 2001026647 | A1 | 20010419 | WO 2000-US27927 | 20001010 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, | | | |

SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, T
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1220665 A1 20020710 EP 2000-986192 20001010

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL

PRIORITY APPLN. INFO.: US 1999-158810P P 19991012
US 2000-664519 A 20000918
WO 2000-US27927 W 20001010

AB The present invention provides methods, products, and compns. for selectively inhibiting the growth of *S. aureus* without preventing the growth of Lactobacillus species. Specifically, the present invention discloses the use of tetrahydroiso-.alpha.-acids or hexahydro-.beta.-acids at a concn. effective for the inhibition of the growth of *S. aureus* without preventing the growth of Lactobacillus. The inhibition of *S. aureus* thus provides useful methods, compns. and products such as feminine hygiene products for treating the diseases assocd. with *S. aureus* infections and infestations, i.e., toxic shock syndrome, without disrupting the normal bacterial flora in the area of its application. The results of MIC assay of tetrahydroiso-.alpha.-acids and hexahydro-.beta.-acids on *S. aureus* and Lactobacillus show that *S. aureus* was much more sensitive to tetrahydroiso-.alpha.-acids and hexahydro-.beta.-acids than the Lactobacillus species tested. Lactobacillus exhibited strong growth in concns. of tetrahydroiso-.alpha.-acids and hexahydro-.beta.-acids as high as 12.5 ppm.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s lactobacillus
L7 68280 LACTOBACILLUS

=> d his

(FILE 'HOME' ENTERED AT 14:59:23 ON 01 DEC 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 14:59:57 ON 01 DEC 2002

L1 202 S HOP ACID
L2 37 S (HEXAHYDRO BETA ACID) OR (HEXAHYDRO BETA SALT) OR (TETRAHYDRO
L3 231 S L1 OR L2
L4 206825 S STAPHYLOCOCCUS AUREUS
L5 3 S L3 (P) L4
L6 3 DUPLICATE REMOVE L5 (0 DUPLICATES REMOVED)
L7 68280 S LACTOBACILLUS

=> s l6 (p) 17

PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L44 (P) L37'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L48 (P) L39'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L50 (P) L40'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L52 (P) L41'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L54 (P) L42'
L8 1 L6 (P) L7

=> s fiber or film or foam or wood or pulp or (peat moss) or (absorbent material) or ((superabsorb
UNMATCHED LEFT PARENTHESIS 'OR ((SUPERABSO'
The number of right parentheses in a query must be equal to the
number of left parentheses.

=> s fiber or film or foam or wood or pulp or (peat moss) or (absorbent material) or (superabsorb
L9 3048335 FIBER OR FILM OR FOAM OR WOOD OR PULP OR (PEAT MOSS) OR (ABSORBE
NT MATERIAL) OR (SUPERABSORBENT POLYMER)

=> s 15 (p) 19
L10 1 L5 (P) L9

=> d 110 1 ibib abs

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:283780 CAPLUS
DOCUMENT NUMBER: 134:300854
TITLE: Hop acids used for inhibition of *Staphylococcus aureus*
INVENTOR(S): Barney, Michael C.; Navarro, Alfonso L.; Ryder, David S.
PATENT ASSIGNEE(S): Miller Brewing Company, USA
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2001026647 | A1 | 20010419 | WO 2000-US27927 | 20001010 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1220665 | A1 | 20020710 | EP 2000-986192 | 20001010 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |

PRIORITY APPLN. INFO.: US 1999-158810P P 19991012
US 2000-664519 A 20000918
WO 2000-US27927 W 20001010

AB The present invention provides methods, products, and compns. for selectively inhibiting the growth of *S. aureus* without preventing the growth of *Lactobacillus* species. Specifically, the present invention discloses the use of tetrahydroiso-.alpha.-acids or hexahydro-.beta.-acids at a concn. effective for the inhibition of the growth of *S. aureus* without preventing the growth of *Lactobacillus*. The inhibition of *S. aureus* thus provides useful methods, compns. and products such as feminine hygiene products for treating the diseases assocd. with *S. aureus* infections and infestations, i.e., toxic shock syndrome, without disrupting the normal bacterial flora in the area of its application. The results of MIC assay of tetrahydroiso-.alpha.-acids and hexahydro-.beta.-acids on *S. aureus* and *Lactobacillus* show that *S. aureus* was much more sensitive to tetrahydroiso-.alpha.-acids and hexahydro-.beta.-acids than the *Lactobacillus* species tested. *Lactobacillus* exhibited strong growth in concns. of tetrahydroiso-.alpha.-acids and hexahydro-.beta.-acids as high as 12.5 ppm.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s tampon or (wound dressing) or suppsitory or (disposable diaper) or (sanitary napkin)
L11 13119 TAMPON OR (WOUND DRESSING) OR SUPPSITORY OR (DISPOSABLE DIAPER)
OR (SANITARY NAPKIN)

=> s 15 (p) 111
L12 1 L5 (P) L11

=> d his

(FILE 'HOME' ENTERED AT 14:59:23 ON 01 DEC 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
14:59:57 ON 01 DEC 2002
L1 202 S HOP ACID
L2 37 S (HEXAHYDRO BETA ACID) OR (HEXAHYDRO BETA SALT) OR (TETRAHYDRO
L3 231 S L1 OR L2
L4 206825 S STAPHYLOCOCCUS AUREUS

L5 3 S L3 (P) L4
L6 3 DUPLICATE REMOVED L5 (0 DUPLICATES REMOVED)
L7 68280 S LACTOBACILLUS
L8 1 S L6 (P) L7
L9 3048335 S FIBER OR FILM OR FOAM OR WOOD OR PULP OR (PEAT MOSS) OR (ABSO
L10 1 S L5 (P) L9
L11 13119 S TAMPON OR (WOUND DRESSING) OR SUPPSITORY OR (DISPOSABLE DIAPE
L12 1 S L5 (P) L11

=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST | 79.41 | 79.62 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -2.48 | -2.48 |

STN INTERNATIONAL LOGOFF AT 15:09:47 ON 01 DEC 2002